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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,419	08/29/2005	Claude R Mallet	60008US(49991)	4959

48990 7590 07/16/2007  
EDWARDS & ANGELL, LLP  
P.O. BOX 55874  
BOSTON, MA 02205

EXAMINER
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GITOMER, RALPH J

ART UNIT	PAPER NUMBER
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1657

MAIL DATE	DELIVERY MODE
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07/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/516,419	<b>Applicant(s)</b> MALLET ET AL.	
	<b>Examiner</b> Ralph Gitomer	<b>Art Unit</b> 1657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 17-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____  |

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Applicant's election with traverse of Group I, claims 1-16, in the reply filed on 5/24/07 is acknowledged. The traversal is on the ground(s) that there is a single technical feature common to all the Groups but the claimed function is not taught by the cited reference. This is not found persuasive because the common technical feature is the claimed surfactant and as claimed it is not novel.

The requirement is still deemed proper and is therefore made FINAL.

A single species of surfactant has been elected as applied to method claims 1-16.

The invention as described in the specification is directed to analysis of a small molecule obtained by lysis of cells with a surfactant where the surfactant is removed prior to mass spec analysis. The improvement is using a specific surfactant with similar properties to SDS but degrades in acid and then can be readily removed. The specification defines small molecule on page 6 first paragraph as all molecules with an atomic mass of less than about 1000.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Ross and Lee.

Ross (Proteomics) published online July 12, 2002 reporting the proceedings of the 1<sup>st</sup> Annual conference of the Swiss Proteomics Society held November 21-22, 2001, entitled "Identification of Proteins from Two Dimensional Polyacrylamide Gels Using a Novel Acid Labile Surfactant" teaches in the abstract, protein identification by mass spec with ALS as an alternative to SDS. The ALS decomposed under acidic conditions. On page 929 column 1 first paragraph, ALS was developed to improve MS sensitivity towards gel separated proteins where it hydrolyses under acidic conditions reducing chemical interference and enhancing MS detections. Note what is actually being detected by the MS is tryptic digests which are short peptides.

Lee (WO 00/70334 A1) entitled "Destructible Surfactants and Uses Thereof" teaches on page 1 methods for analysis of large molecules such as proteins and peptides with surfactants that can be destroyed at low pH levels. On page 5 lines 15-18 the surfactants may be used in applications which benefit from the initial presence and ultimate removal of a surfactant such as solubilization, analysis, separation, purification and/or characterization of large molecules. On page 12 the same compound as presently elected is disclosed. See the claims which simply refer to a sample and do not refer to its molecular weight.

The claims differ from each of Ross and Lee in that they specify the method is for analysis of a small molecule where the references refer to large molecules.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the surfactant taught by each of Ross and Lee to analyze small molecules because the references teach digests of large molecules which are then analyzed where such digests form small molecules that are analyzed. It is shown that it is desirable to use the presently elected surfactant to improve the analysis of the digests. So to begin with small molecules and analyze them would be a subset of the analysis taught by the references. Further, to employ the presently elected surfactant for its known function with the expected results would have been obvious.

There is minimal distinction between the references which teach the presently claimed method for "samples" and show examples of digested proteins analyzed vs. the present claims which are directed to analysis of "small molecules". One would have a high expectation of success in employing a method known to analyze small peptides

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and then analyze "small molecules" by the same method for the same purpose. The point of novelty appears to be the substitution of SDS with the presently elected acid degradable surfactant and this substitution is clearly taught by the above references.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zielonka (World Surfactant Congress) teaches the presently elected surfactant.

Yamamura (Onaka Municipal Technical Research Institute), English translation provided, teaches the presently elected surfactant.

Piasecki (J of Colloid and Interface Science) teaches the presently elected surfactant.

Piasecki (J of Surfactants and Detergents) teaches the presently elected surfactant.

Bouvier (WO 03/102225 A1) teaches the presently elected surfactant.

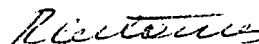
Piasecki (PL 177 120 B1) English translation only provided, teaches the presently elected surfactant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ralph Gitomer whose telephone number is (571) 272-0916. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on (571) 272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ralph Gitomer  
Primary Examiner  
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